



"Dedicated to Public Service"

# THE RADIATOR



W6RHC

IRL #8170

Echolink #322788



<http://www.gearsw6rhc.org>

P.O.Box 508 Chico, CA 95927-0508

Founded: August 13 1939

June 2015

## Coming Events

### O.A.R.S. GENERAL MEETING

Second Friday, every month, at 7:00 p.m., at St. Paul's Church Parrish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Wednesday, each month, General Meeting, Lutheran Church Hall, Artois; 7:00

G.E.A.R.S General Meeting, third Friday each month, at Butte County Search and Rescue Building, Chico. Doors open at 6:00 p.m.

Butte A.R.E.S. MEET: fourth Friday, monthly, at Butte County Search and Rescue Building.

### FCC EXAMS - GEARS VEC

First Sunday of every even numbered month.

At the Butte County Search and Rescue Building. Written test at 2:00 p.m. For information or pre-registration call Tom Rider -W6JS; 530-893-9211

### Club Events:

News and items of interest  
GEARS Calendar...all inside.

Website: [www.gearsw6rhc.org](http://www.gearsw6rhc.org)



Picture courtesy EVARC

## The Prez' Says:

It is now June, the month for young brides and Field Day. I don't think one has anything to do with the other but it was an introduction of sorts. I can report that the June meeting of the GEARS group is going to be a busy one. Mark your calendar for June 19, 2015. That's the day for our next meeting. Tom Rider has received the missing parts for the Buddypole knockoffs and asks that you bring your pieces, if you can remember where you put them. He and Gene will be helping us assemble the antennas at the meeting. And while we are putting things together, it will also be practice for writing radiograms to be used on Field Day.

We need to have a total of ten (10) radiograms to send out on that week-end. Field Day is June 26, 27, 28 2015. Set up is on the 26th, that's Friday and the festivities start at 11:00 am on Saturday the 27th. We get to operate until 11:00 am on Sunday the 28th. Friday night is for the die-hards who want to camp out and brave the mosquitoes. I personally will be operating 80M voice and calling my traffic net from Field Day. Gene has some teams lined out to cover the bands and disciplines of operation. We need relief operators and helpers of all varieties. Come join us for the fun. Saturday night will be the BBQ with basic grub supplied by the club and you can bring extra goodies to your heart's desires.



Continued page 3

**Board of Directors Meeting: May 15 2015**

**ATTENDANCE** No quorum.

**MEMBERSHIP APPLICATIONS:**

**OLD BUSINESS:**

**NEW BUSINESS:**

ADJOURNMENT: 18:00 hr.

**Dale Anderson,  
Secretary**



**MINUTES OF GENERAL MEETING for May 15 2015**

**PROGRAM: Auction month**

**ATTENDANCE:** Vice-President not present.

**ANNOUNCEMENT:**

**VEC:** None.

**MINUTES:** Approved the minutes from April meeting.

**TREASURER:**

This month's report is \$694 and we made \$367 from the action.  
Last months report was accepted.

**OLD BUSINESS:**

Parts for the home brew buddy pole are in.

**NEW BUSINESS:**

We now have a locker at the Sheriffs Com Reserve.

Field Day location this year will be at Platt Mountain.  
The gate will be open Friday June 26 after 12 noon.

Sheriff's Com Reserve has offered their mobile generator and mobile hf rig.

ADJOURNMENT: 21:00 hr.

**Dale Anderson,  
Secretary**

**SILENT KEY**  
**BART ICKES— ke7uor -**

Bart was a recent member of GEARs, having joined during 2014. Bart's interest in radio was spiked at the age of 8, when he bought his first crystal 3 channel Realistic radio. Shortly thereafter one of his aunt's gave him a 40 channel-II meter band radio and he was hooked! He received his novice class license in 1987, while living in California, and after moving to Brookings, Oregon, in 2008, obtained his General class license. In Oregon he became deeply interested and active in the WIN System .

Bart died May 15, 2015, as a result of a single vehicle accident on U.S. 199 in Del Norte County-near Jedediah Smith State Park. Bart was 51.

He was a friend to many, generous with his time and talents. He had numerous friends in the amateur radio community in California and Oregon.

Bart will be sorely missed.

He is survived by his children and grandchildren for whom he had wished to imbue as deep a love for ham radio as he himself possessed.

Prez Says, continued

**I have not heard any info on the Wilderness Run held up there with the Bambi Inn as headquarters. Our newest member, Gary McElroy with the Butte County S & R was coordinating the radio support. Sounds like it was going to be a lot of fun and the weather was perfect to spend time in the High Sierra Foothills.**

**So until I think of something I forgot or we need to send reminders, I wish you clear airways and good propagation.**

**Anna KG6ZOA**



Caps embroidered with your name and your call sign may be ordered by contacting WA6ZRT -Gene Telephone #530 -345-3515

**VEC TESTING**  
**2:00 p.m.**  
**June 7, 2015**  
**August 2, 2015**

**AT BUTTE COUNTY  
 SEARCH & RESCUE  
 BUILDING**

**All Classes  
 Technician, General and  
 Extra.**

**Contact:**  
**Tom Rider-W6JS**  
**530-893-9211**  
**Rustyboy rider@aol.com**

Tube of the Month  
**HV-1 (A tube that sucks)**

There are vacuum tubes and other devices that require additional vacuum pumping or must be completely pumped down in operation. A transmission electron microscope is like a cathode ray tube where the tube is opened up and the sample to be scanned is placed in the electron beam. The tube is then pumped down before any voltages are applied. A rotary vacuum pump and a series of valves are used to get a vacuum. The microscope I used in college had a bad habit of loosing control of the pump and sucking oil into the valve system. It would take me 3 hours to clean it out. Very large tubes like the high power klystrons have diffusion pumps built into the tube to maintain an adequate vacuum.

In 1942, Eimac developed the HV-1, a diffusion pump that was produced for over 20 years. The HV-1 has a heater element in the base that heats a special oil that is vaporized and rises into the tapered aluminum structure in the middle. It works like that stinky Vicks Vaporizer your mother made you smell as a kid.

The top of the tube has a manifold that is attached to the item to be evacuated. This area is cooled by a fan. The oil vapor rises in the column and molecules of gas diffuse into the oil before it condenses on the glass and runs into the base. There are three stages of this process with higher concentrations of molecules near the base. The neck in the side is attached to a mechanical forepump that has the ability to remove the gas. The oil is re-heated and vaporized again. The process can achieve a vacuum of  $4 \times 10^{-7}$  mm of mercury.

The HV-1 I have made in 1942 and may have been the first unit ever made. It was once donated by Eimac to a museum and had a date tag.

Visit the museum at [N6JV.com](http://N6JV.com)  
Norm N6JV



## FCC TO ELIMINATE VANITY CALL SIGN FEE

The FCC is eliminating the regulatory fee to apply for an Amateur Radio vanity call sign. The change will not go into effect, however, until required congressional notice has been given. This will take at least 90 days. As the Commission explained in a Notice of Proposed Rulemaking, Report and Order, and Order (**MD Docket 14-92** and others), released May 21, it's a matter of simple economics. "The Commission spends more resources on processing the regulatory fees and issuing refunds than the amount of the regulatory fee payment," the FCC said. "As our costs now exceed the regulatory fee, we are eliminating this regulatory fee category." The current vanity call sign regulatory fee is \$21.40, the highest in several years. The FCC reported there were 11,500 "payment units" in FY 2014 and estimated that it would collect nearly \$246,100. In its 2014 Notice of Proposed Rulemaking ((NPRM) regarding the assessment and collection of regulatory fees for FY 2014, the FCC had sought comment on eliminating several smaller regulatory fee categories, such as those for vanity call signs and GMRS. It concluded in the subsequent Report and Order (**R&O**) last summer, however, that it did not have "adequate support to determine whether the cost of recovery and burden on small entities outweighed the collected revenue or whether eliminating the fee would adversely affect the licensing process." The FCC said it has since had an opportunity to obtain and analyze support concerning the collection of the regulatory fees

for Amateur Vanity and GMRS, which the FCC said comprise, on average, more than 20,000 licenses that are newly obtained or renewed, every 10 and 5 years, respectively. "The Commission often receives multiple applications for the same vanity call sign, but only one applicant can be issued that call sign," the FCC explained. "In such cases, the Commission issues refunds for all the remaining applicants. In addition to staff and computer time to process payments and issue refunds, there is an additional expense to issue checks for the applicants who cannot be refunded electronically." The Commission said that after it provides the required congressional notification, Amateur Radio vanity program applicants "will no longer be financially burdened with such payments, and the Commission will no longer incur these administrative costs that exceed the fee payments. The revenue that the Commission would otherwise collect from these regulatory fee categories will be proportionally assessed on other wireless fee categories." The FCC said it would not issue refunds to licensees who paid the regulatory fee prior to its official elimination.

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From <http://www.arrl.org/news/fcc-eliminates-amateur-radio-vanity-call-sign-regulatory-fee>

**MEMBER OF THE MONTH—ROY “GENE” ROLLS**

Roy “Gene” Rolls, WB6DLW, is GEARS one-and-only Lifetime Member (so far). He doesn’t know why his mother named him Roy, and then always called him Gene, but he still answers to “Gene” to this day.



Gene was born in 1930, and grew up in Chico. When he was 14 years old, he started working part-time for the Butte Pump and Motor Company, at the corner of Ninth and Broadway, sweeping floors, doing odd jobs, and helping build their new building in 1945. He learned how to re-wind pump motors, and worked steadily at the company through grade school, high school, and his first two years of college.

Gene first became interested in radio around 1951 after he purchased a modern state-of-the-art “Hi-Fi” radio (years before Stereo). He was quite pleased with the new unit, but when his younger brother heard a record played on it, he proclaimed it was “junk”. His brother challenged Gene to bring the same record over to his house and play it on the new Heathkit unit he had built himself. Gene accepted the challenge, and when he heard record played through the Heathkit Hi-Fi, it sounded so much better, Gene heard things on that record that he didn’t even know were there. The spark of interest was lit.

Gene soon built his own Heathkit, using a 250 Watt soldering iron, because that’s what he had available. It worked fine for a while, but after a few days it started making a terrible, loud hum, and the vacuum tubes were glowing red-hot. Gene tried to take the kit back to the shop where he bought it, and quickly learned he was on his own. Next Gene asked for help from his other older brother, who was an electrical engineer. After looking it over, his older brother said “tsk-tsk”, and loaded the whole thing into his station-wagon, and took it home with him to completely rebuild .

Gene’s Heathkit Hi-Fi worked just fine after that, but the experience motivated him to take a few electronics classes. His teacher was Bill Pope. At the beginning of his third year, Mr. Pope said “This year, we’re going to study Ham Radio”, and by the end of the year Gene had earned his first Amateur Radio license, over 57 years ago, in 1957.

Gene was promoted to Salesman at Butte Pump, and worked at that successfully for a couple of years, until his father-in-law asked him to work for him. Gene enjoyed several very successful years running the office for his father-in-law’s construction business. Changes in the economy, and an appetite for new challenges, prompted Gene to get a job at the KHSL TV station, maintaining the TV transmitter.

His first day on the job at KHSL, the ink was barely dry on his new first-class FCC license. As he walked through the door and saw the transmitter for the first time, he was a little bit awestruck by all of the humming, glowing high-tech TV transmitter equipment. But the job turned out to be more boring than he could have imagined. There were over 2000 vacuum tubes that each had to be taken out and tested once a month. Most of the job was just babysitting the transmitter, watching the meters, and writing fictional power output measurements into the logbooks once per hour, all day long.

The hours of boredom were occasionally punctuated by moments of sheer terror, when something started sparking or smoking. One day there was a bright flash from behind one of the panels, and a little



smoke, but everything still seemed to be working OK, so Gene waited until the end of the day, after the transmitter was shut down, to open the panel and take a look. He found a mouse had shorted himself out on a six-thousand volt capacitor, and had become a very crispy critter.

To help pass the time at the TV transmitter job, Gene did a little moonlighting, repairing radios that had been brought in by customers to a local radio repair shop. He traded his work on the radio repairs for store credit at the repair shop, and ended up with tons of the latest radios and electronic gear.

When FM radio first went on the air, Gene designed and installed a huge rhombic antenna 117 feet long and 44 feet wide. From Forest Ranch he could receive FM and TV all the way from San Francisco, which was almost unbelievable at the time. He also made many, many contacts on ham radio, all over the world, using a three-element beam mounted on a 50 foot tower. From his position on the hill, he was able to easily make DX contacts with only 150 Watts that other hams couldn't make with 1500 Watts.

When the GEARS members started looking around for a good 2-meter repeater site, Gene offered a spot on his property, where the W6RHC repeater has currently lived happily for over thirty years. Later, Gene officially donated the slice of his property where the repeater is located to GEARS, Inc. so the repeater site can be preserved and kept for future generations of Amateurs Radio operators.

In the early 1980's, Gene also enjoyed making phone calls from his vehicle using ham radio, many years before cell-phones were available to the general public. He used his mobile ham radio rig to make calls using the "phone-patch", from almost anywhere in the valley, from as far south as Sacramento to as far north as Redding.

After his divorce in 1983, Gene accepted a job in Saudi Arabia, and began a very successful career there, beginning his many travels to every continent, and around the world seven times. On one trip back to the USA he sat next to an attractive woman on the airplane, and regaled her with tales of Saudi Arabia. He gave her his business card. A few weeks later she wrote him a letter. He sent her a few pictures of his exotic travels. Two-hundred letters later, Gene and the lovely Dorothy married.

Gene says they "had a ball" travelling around the middle-east together. When Gene took his new bride Dorothy to see the Taj Mahal, he had already been there once before. He found the best way to open the most interesting doors was to tip generously the local man who owned the trained dancing bear.

In 1989, Gene filmed, edited, and narrated an interesting film about Saudi Arabia, which includes a few things you might expect to see, sand dunes and camels, as well a few you might not expect, such as troops of baboons eating locusts, or turtles swimming in the fresh clear blue water of an artesian well.

Gene decided to leave Saudi Arabia in 1991 after a SCUD missiles landed somewhere between his office and his apartment. (Dorothy was already back in the USA). Gene hitched a ride on a huge, empty C-141 military transport plane on its way to Frankfurt, Germany. After the plane was out of the war zone, he was allowed to climb up the ladder into the cockpit, to talk with the pilot, and sit in the copilot seat, looking out the front window as they flew out over the darkness of Red Sea, and the snow-covered mountains, glowing in the moonlight.

After returning to the USA, Gene retired. He and Dorothy rented out their house in Forest Ranch and spent the next eight years travelling around the country in a full-sized RV. Their cozy home in Forest Ranch now is richly decorated with many interesting, exotic artifacts, and souvenirs from their travels.

In addition to his interests in world travel and Amateur Radio, Gene has also cultivated a long-lasting interest in searching for buried treasures with a metal –detector. Over the years, he has found buckets full of treasures, including jewelry, all kinds of coins and historical artifacts, found everywhere from local city parks to ghost towns in Nevada and the middle-east. Searching near a forgotten ancient Turkish fort in Saudi Arabia, he found some old Roman-looking coins so mysterious they have stumped the experts who have tried to identify them.

He showed me pictures of himself posing with piles of unburied treasure. The Garrett metal-detector company was so impressed by Gene's success that they used some of these photos in their glossy advertising, and Gene even became a dealer for Garrett for a few years.

As often seems to be the case with these Meet-a-Member interviews, Gene has too many interesting stories to fit in one small article. Sadly, Gene sort of gave up on Amateur Radio after he came back from his travels and so many of his old 160-meter ham radio buddies were gone. A few years ago, Gene gave all his radios to Jerry Fuller, for Jerry's radio museum, and he hasn't used his license for a while.

I enthusiastically invited and strongly encouraged Mr. Rolls to join me and other GEARS members for a few hours during Field Day this year, on June 28-29 at the Platt Mountain fire lookout, not too far from his house. Any ham who has not been on the air for a while can operate the "Get-On-The-Air" station during field day with a "coach", and earn double-bonus points for the GEARS team on every contact.

Bonus points or not, Roy "Gene" Rolls is a fascinating guy with a lot of interesting stories to tell. There are probably a lot of hams who would really enjoy a chance to rag-chew with Gene if they were given the opportunity. Gene is in remarkably good health for an 84 year-old man, and you might easily guess him to be ten years younger. Gene and his charming wife Dorothy just celebrated their twenty-seventh wedding anniversary. They've shared many happy years together, and look forward to many more.

-73-

Interviewer:

Michael Favor-N6fav

Author: Michael Favor





**AND ONCE THEY GET THEIR  
"FOOT IN THE DOOR" HOW QUICKLY WILL THIS  
SPREAD TO ALL ELECTRONICS IN ALL VENUES?**

**"Deere Says you Don't Own That Tractor You Bought!!**

**In July the U.S. Copyright Office will hand down a decision on whether individuals can "repair" the software and computer code that controls most new tractors, pickups, cars and other equipment. John Deere, General Motors and other manufacturers have submitted brief to the government saying that farmers don't own their tractors but receive "an implied license for the life of the vehicle to operate the vehicle". In other words, it's Deere's tractor. It's just parked on your place.**

**The practical implication of the ruling would be that only dealers or company authorized personnel would be allowed to work on the computerized software systems that control everything from smart phones to combines. Individuals or shade tree mechanics will not be able to buy electronic diagnostic equipment or even to hack into the software that runs their equipment. Under the proposed rule the manufacturers own the software in your machine**

**The Electronic Frontier Foundation is fighting for open access to electronics in the machines we buy. Go to: [www.eff.org](http://www.eff.org)**

**(from the May-June 2015 Farm Show magazine)**



## **N7RCA**

***Northern Nevada 10th. Annual Swap Information***

***First Saturday of June Every Year.***

***Next Swap meet June 06, 2015***



***COLLINS ESTATE SALE 100's of Collins radios and parts***

***HP, TEKTRONIX, JOHNSON, ICOM, HALLICRAFTERS,  
35 MM PROJECTORS, AMPLIFIERS, TUBES,***

***POWER SUPPLIES, MARINE RADIOS, YEASU, COLLINS  
AND OTHER FILTERS, TUNERS, TOWERS,  
AND MORE.....***

***What to Bring: Wife, friends, drinks, food, chairs and a table  
for swap.***

***AGENDA: Swap - Buy - Sell - Trade- Have fun  
Spaces are FREE.***

***Please pass this along to other groups and operators:***

***All are invited to the Northern Nevada Radio Swap Meet on  
June 6, 2015 7:30 am until ???***

***MINDEN NV. (20 miles from S. Lake Tahoe)***

***AM, SSB, COLLECTORS, BROADCASTERS, and their  
FAMILY'S***

***RV's welcome on the ranch, lots of room.***

***Swap meet is on a 6 acre ranch parking and RV's are not a  
problem.***

***BRING LOTS OF STUFF TO SWAP and Sell***

***All persons are invited who are interested in radio.***



**The GEARS Newsletter Staff:****Editor and Publisher**.....Dorothy Post**Printing & Distribution snail mail:** Evelyn Weir**Website**...Stephen McDermott W6AKF

The Radiator is a monthly publication of the Golden Empire Amateur Radio Society (GEARS). It is the policy of the Editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio, of interest to GEARS members, and space is available. Please send all submissions to the Editor – Dorothy Post by the last day of the month through the following medium: E-mail: dj@posthouse.us

**Club Officers: (Board of Directors)**

President .....Anna Horn –KG6ZOA

Vice President..... Scott Petersen-KE6VUS

Secretary .....Dale Anderson-KK6EVX

Treasurer.....Rick Hubbard-KI6VOS

Past President .....Gene Wright-WA6ZRT

Director..... Tom Rider-W6JS

Director.....Stephen McDermott W6AKF

Director.....Stephen Wolske-KF6HSS

**Club Meetings****General Meeting Third Friday 7:00 PM****Board Meeting Third Friday 6:00 PM****GEARS Club Net****Tuesdays 8:00 PM 146.850 MHz-PL 110.9**

**GARS Club Net:Monday,19:30 147.105+Mhz PL 110.0**

**Sacramento Valley Traffic Net****Nightly 9:00 PM 146.850 MHz-PL 110.9****ARES Nets:****Butte Mondays 20:00 146.850 MHz-PL 110.9****Yuba Sutter Thursdays 19:00 146.085+MHz PL 127.3****Glenn Thursday 19:30 147.105 MHz +PL 100.0****Other Nets:**

**Sac Valley Section Net—7:00 PM 2nd Wed of the month 146.085 MHz+PL 127.3**

**440 Wed. Night 8:00 PM Wednesday 440.650 MHz****Golden Bear 7:00 PM Daily 3975 kHz****Willie Net 8:00 PM Mondays 1930 kHz****Western Public Service System (WPSS)****Winter 5:00 – 7:30 PM 3952 kHz****Summer 6:00 – 8:30 PM 3952 kHz**

**ARISS (International Space Station) Uplink 144.490 MHz Downlink 145.800 MHz**

**Hope-1 satellite: all uplinks are in 145Mhz band:****All downlinks are in 435Mhz band****...California Traffic Net: 3906 KHz nightly @6:00 pm****For traffic listing & @6:30 p.m. for roll call.****Privacy Tip:****An Easy Way To Create And Remember Strong Passwords**

Creating strong passwords and passphrases can be challenging - and remembering them can be even trickier! Journalist Micah Lee of *The Intercept* recently shared a way to solve both of these problems using a method called

"Diceware" that uses (you guessed it) dice and a word list. The resulting passwords are virtually unguessable. In fact, Lee calculates that a 7-word Diceware generated passphrase would take an average of 27 MILLION years to guess!

**[Read how to use this helpful hack yourself and learn Lee's memorization technique his article, Passphrases That You Can Memorize - But That Even the NSA Can't Guess.](https://firstlook.org/theintercept/2015/03/26/passphrases-can-memorize-attackers-cant-guess/)**

**<https://firstlook.org/theintercept/2015/03/26/passphrases-can-memorize-attackers-cant-guess/>** Posted on The Intercept article dated 3/27/2015

For your everyday passphrases, i.e. like ham sites, Valley Ham News offers a sensible and unforgettable password process in their May, 2015 newsletter. Combined with the above, for your critical programs, you may achieve complete password protection.

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**TRIVIA OF THE MONTH**

Restoring stainless and chrome finishes & glass surfaces?

"Steel wool is your best friend. Bring back original stainless and chrome finishes, prep surfaces, clean glass, and more. Just make sure to use No.0000, as any other grade will screw up your task.

For cleaning glass, combine it with traditional Colgate toothpaste. Coca-Cola works great on chrome.

<b>Sunday, August 3, 2015 October 4, 2015</b>	<b>2:00 p.m.</b>	<b>VEC—Exams</b>	<b>Butte Co. Search &amp; Rescue Building 2591 Morrow Lane, Chico</b>	<b>Tom Rider</b>
<b>Wednesday June 10, 2015</b>	<b>Board-6:00 p.m. General Meeting 7:00 .</b>	<b>GARS-Glenn Glenn Amateur Radio Society General Meeting, &amp; Amateur Radio Emergency Services</b>	<b>Lutheran Church Hall: 565 Main Street Artois</b>	<b>Albert Leyva</b>
<b>Friday, June 12, 2015</b>		<b>OARS Oroville Amateur Radio Society General Meeting</b>	<b>St Paul's Church Parrish Hall 1430 Pine Street Oroville</b>	<b>John Hunt 530 589 4734</b>
<b>Friday June 19, 2015</b>	<b>Board-6:00 p.m. General Meeting 7:00 Doors open 5:30 p.m. .</b>	<b>GEARS Golden Empire Amateur Radio Society General Meeting/Elections</b>	<b>Butte County Search and Rescue Building 2591 Morrow Lane Chico</b>	<b>Anna Horn -kg6zoa 530-877-5939</b>

**JUNE 27, 28  
FIELD DAY**

**Gates open on Noon or shortly thereafter on June 26th for early set up at Platte Mountain Lookout site.**

**If you have not already done so, please contact Gene Wright, WA6ZRT, 530-345-3515 to let him know you will be participating and your preferred category.**



Picture courtesy EVARC